

# Injection Depth Waivers and Aquifer Exemption Expansions Crosswalk

## Contents

[ TOC \o "1-3" \h \z \u ]

DRAFT

## Evaluate Information about the Injection Depth Waivers and Aquifer Exemption Expansions of the Proposed GS Site

40 CFR 146.82(d); 40 CFR 146.95(a); 40 CFR 144.7(d)(1) and 40 CFR 146.4(d);  
Implementation Manual Section 4.

This Crosswalk includes information from the Title 40 Code of Federal Regulations (CFR) and generally follows the layout of the Geologic Sequestration Data Tool (GSDT) and narrative templates, with additional information pulled from the Sequestration Guidance documents available on EPA's national UIC program website.

If you have uploaded a file to the GSDT the name will be captured in the system, as will all the filled-in or selected options. They can be downloaded by the permit reviewers as pdfs.

### Additional Considerations

An aquifer exemption expansion<sup>1</sup> (40 CFR 146.95(d)) is under the federal program regardless of primacy and ultimately requires both written approval (or not) by the EPA Regional Administrator (only), and a substantial revision to the state's approved primacy program (40 CFR 147 and 40 CFR 145.32). If approval is decided upon, publication of the public notice for the aquifer exemption and the Class VI draft permit could be planned to coincide.

### Narratives

Narratives cover the range of information desired and leave the final organization to the applicant's preference. The Crosswalk does not replace the Template but may add items to consider. Where there are similar questions repeated in different sections of the Template, the Crosswalk attempts to put those in a preliminary discussion at the front of the document in a generic format (i.e. each subsection will have a slightly different focus to reduce repetition).

### Documents

To keep document size manageable and provide all the information in a usable format, it would be useful to create a separate file or files for the different types of information. If the GSDT upload option does not allow multiple files or overwrites the first one, zip the files together prior to uploading.

The Project Information Crosswalk discusses file format, styles, sizes, and types of supporting documentation requests under *Formatting and Other Data Expectations*.

### Referencing Other Submissions

Note that a number of discussions are included under multiple headings and different modules. To avoid errors and duplication, please do NOT submit the detailed information twice. Include the appropriate synthesis in the section discusses and reference materials submitted as part of the permit application, via the AoR delineation modeling input advisor, etc., but references should be specific (e.g., "Computational modeling results - see permit application Section 1, pages 2

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<sup>1</sup> Note there is a presumption that an initial exemption is in existence.

through 5 and Figures 1.7 through 1.12, as submitted 1/1/14." ). Referenced materials should explicitly address the selected requirements. If using an uploaded file, include the file name as well.

## Injection Depth Waivers and Aquifer Exemption Expansions

### Injection Depth Waivers

Table [ SEQ Table \\* ARABIC ]: Injection Depth Waivers

Information	CFR and Guidance	Location & File: GSDT or CBI?
1. Items to be submitted	40 CFR 146.95(a) or Applicable State Requirements; LAC Injection depth waivers will not be granted.	

Table [ SEQ Table \\* ARABIC ]: Injection Zones

Information	CFR and Guidance	Location & File: GSDT or CBI?
Injection Zones		
1. Demonstrate		
a. lateral continuity,		
b. is not a USDW,		
c. is not hydraulically connected to USDWs;		
d. does not outcrop;		
e. has adequate injectivity, volume, and sufficient porosity to safely contain the injected carbon dioxide and formation fluids;		
f. has appropriate geochemistry.		

Table [ SEQ Table \\* ARABIC ]: Confining Units

Information	CFR and Guidance	Location & File: GSDT or CBI?
Confining Units		
1. Demonstrate		
a. lateral continuity,		
b. impermeable confining units above and below the injection zone(s) adequate to prevent fluid movement and		

Information	CFR and Guidance	Location & File: GSDT or CBI?
pressure buildup outside of the injection zone(s)		
c. free of transmissive faults and fractures		
2. characterize the regional fracture properties		
a. not conduits		
b. not interfere with injection or endanger USDW		
c. Demonstrate		
USDW non-endangerment		
1. Modeling results from AoR to support position		

Information	CFR and Guidance	Location & File: GSDT or CBI?
Well design and construction		
1. demonstrate well design and construction, in conjunction with the waiver		
a. isolation of injectate		
b. construction requirements met		
Monitoring and testing		
1. Describe or reference all plans to ensure continued protection of USDWs above and below the injection zone (if waiver granted)		
Location of PWSs		
1. All PWSs served by USDWs in AoR or likely to be affected		
Other Information		
Previously submitted material or new files		

Table [ SEQ Table \\* ARABIC ]: Aquifer Exemption Expansions

Information	CFR and Guidance	Location & File: GSDT or CBI?
Aquifer Exemption Expansions	40 CFR 144.7(d) and 40 CFR 146.4(d) or Applicable State Requirements; LAC §3603.F.4 and §3603.F.2.d	
1. Items to be submitted		
Description of area requested to be exempted	40 CFR 146.4; LAC §3603.F.2	
1. Demonstrate clearly defined aquifer(s)		
a. Lateral and vertical continuity,		
b. gradient		
Not a DW source		
1. Demonstrate it does not currently serve as a source of drinking water		
TDS content		
1. Demonstrate total dissolved solids content of the ground water is more than 3,000 mg/L and less than 10,000 mg/L		
Not expected to supply		
1. Demonstrate it is not reasonably expected to supply a public water system.		
Previously submitted material or new files		

Table [ SEQ Table \\* ARABIC ]: Complete Submission

Information	CFR and Guidance	Location & File: GSDT or CBI?
Validate Required Fields		
1. Required check for blank fields		
Authorized submission		
1. Must have completed an EPA Electronic Signature Agreement		
2. Submit means you agree to the certification.		